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AUTHOR Kirby, Emily B.; Bowers, Norman D.
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ABSTRACT

Few investigations have focused on determination of efficient methods for providing teachers with human relations skills. Even less emphasis has been placed on observation of change in teachers' interpersonal skills after inservice training. The purpose of this study was to test the comparative effectiveness of two training programs for developing teacher interpersonal competencies. These two programs were the T-Group and the Human Potential Seminar (HPS). The subjects were women teachers at an experimental elementary school. Inventories were collected before and after participation in the T-Group or HPS. Two qualified observers visited each teacher's classroom on two occasions, once prior to and once following training. Teachers were divided into four groups. One group received both the T-Group and HPS training; the second group, T-Group training only; the third group, HPS only; and the fourth, no training. Results seemed to indicate that there is some evidence that differences do exist between teachers who have had some form of human relations inservice training and those who have not. The groups can be ranked in terms of positive behavioral change as follows: (a) T-Group and HPS, (b) HPS, (c) T-Group, and (d) no training. (PB)

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AN EXPERIMENTAL COMPARISON OF TWO STRATEGIES FOR DEVELOPING TEACHER INTERPERSONAL COMPETENCIES[1]

Emily B. Kirby
Central YMCA Community College
Department of Institutional Research
Chicago, Illinois

and

Norman D. Bowers
Northwestern University
School of Education
Evanston, Illinois

A central problem relating to the education of teachers after their initial preparation is that of producing change in classroom interpersonal competence. Unfortunately, few investigations have focused upon determination of efficient methods for providing teachers with the requisite human relations skills. Even less emphasis has been placed upon observation of change in teachers' interpersonal skills after in-service training. (cf. Kirby, 1974 for a literature review on these topics)

This lack is surprising in consideration of continued interest in human relations as a facet of American education (cf. Withal and Lewis, 1963). Most educators are aware of some preoccupation with the training for increased effectiveness in human relations that began

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shortly after World War II and has continued to the present time (cf. Cooper & Maughan, 1971, Dunnette and Campbell, 1968). For reasons not readily apparent, studies evaluating interpersonal skills as outcomes of in-service training programs are scarce, as are studies which use classroom observation. Within our perspective, however, there are three studies which have provided satisfactory data and methodology for comparing the differential effects of in-service programs.

These three which have been discussed at length in other papers form a foundation for the current study which was designed to compare two programs for developing teacher interpersonal competencies. The two programs selected were T-Group training and Human Potential Seminar.

T-Group.---The T-Group program, modeled after that given by the National Training Laboratory in Group Development (NTL), was administered by employees of the Chicago Board of Education. The focus and basic structure was similar to NTL workshops. The experience consisted of three parts: a lecture dealing with some aspect of interpersonal relations, a task to be carried out under direction, and unstructured group discussions. In addition, other selected exercises were added, including, for example, the Blind Walk, in which pairs of trainees took turns being blindfolded and led. The training differed from the standard NTL format in other ways as well. Since the teachers went to their homes each evening, training saturation level was different. There were no other groups simultaneously in training, thus cooperative-competitive tasks were not undertaken. Likewise the anabolic and catabolic evolution of the groups was not experienced. Finally, the group was homogeneous in composition (all participants were female elementary school teachers).

Human Potential Seminar.---The Human Potential Treatment consisted of a program of educational exercises which the leader modeled, then all participants performed. Activities used for this study included goal setting, personal unfoldment, Peak Experience recall, successful and satisfying experiences, value clarification, and strength acknowledgement. This programmatic human relations training method had been developed at Kendall College in Evanston, Illinois, and was used at the two- and four-year College level to reduce attrition among students. It also served as an adjunct to counseling services in both high schools and colleges. Though little evaluation research appears to have been completed on Human Potential Seminar, a comprehensive review is available (Kleeman). To our knowledge, the method had not previously been tested with elementary school teachers. The positive orientation and supportive features of the method seem to offer promise of utility in an educational setting.

Comparison between the Methods.---Major differences between the treatments concerned the role of the leader. In T-Group, the leader does not participate in the group as a peer; in Human Potential Seminar, the leader is a participant model. The neutral approach to behavior taken in the T-Group is contrasted with the emphasis upon positive behaviors in Human Potential Seminar. The structure of "talk space" is absent in T-Group, while the Human Potential Seminar explicitly divides "talk space" into equal portions. Finally, the anxiety arousal of T-Group is opposed to anxiety allaying in Human Potential Seminar. Thus, both treatments offer some attractive behavioral options to teacher participants. Each attempts to increase effectiveness of interpersonal skills that would seem to contribute to classroom effectiveness.

Design

Subjects.---The specific purpose of this study was to provide some test of the comparative effectiveness of these two methods. The subjects were women teachers, assigned to the Walt Disney Magnet School, Chicago, Illinois. Walt Disney Magnet School is a public elementary school having an integrated staff and students who are representative of the population of a large segment of the Chicago Board of Education school attendance area. The teaching program of this experimental school included such elements as open classrooms, team-teaching, and multi-age grouping.

Measures.---Two different types of measures were used: Inventories and observations. Cognitive and attitude measures administered to the subjects included: Verbal Facility, Rokeach Dogmatism Scale, Minnesota Teacher Attitude Inventory, and three instruments primarily developed for research on teacher attitudes, Teacher Practices Inventory, Teacher Practices Questionnaire, and Young Teacher Change Inventory (cf. Kirby, 1974 for full description). The Observation Schedule and and Record (OSCaR 5V) was used to gather direct behavior observation data. This instrument contains scales descriptive of the teacher's verbal behavior in the classroom. Question Source, Question Difficulty, Question Quality deal with dimensions of the teacher's inquiry behavior, while Managing Behaviors, Lecturing Behavior, Rebuking Behavior and Permissive Behavior permit recording of interpersonal interactions.

Procedures.---The psychometric measures were collected prior to and following participation in the T-Group or Human Potential Seminar. For the observation data, two trained observers visited each teacher's classroom on two occasions prior to training, with the same patterns of

observations after the training.

Teachers were arranged so that a four-group design resulted. One group of teachers received both T-Group and Human Potential Seminar, a second received T-Group only, the third received Human Potential Seminar only, while the fourth group received no human relations in-service training.

Table 1

Design and Frequencies for
Comparison of Two In-service Training Methods

		T-Group	
		Yes	No
Human Potential Seminar	Yes	5	7
	No	5	7

T-Group training was conducted during a three week period in the fall of 1972; Human Potential Seminar training was conducted during the late winter of 1973. Classroom observations were made following the training operation, and each participant was asked to complete all other instruments following the last training session.

Data Analyses.---A number of different steps were completed to analyze data that were collected. First, the scores from the pre-training administration of the inventories were tested for normality of the underlying distribution and found to be normally distributed. Then intercorrelation matrices were computed to evaluate independence of the measures. The scales were found to be sufficiently independent and it was concluded that the inventory measures contributed information

of potential value relating to teacher characteristics. Finally, analyses of variance was undertaken on the pretraining data. No significant F-ratios resulted from these analyses. At least there were no significant differences among the four groups of teacher participants with regard to the inventories, pretraining.

The same basic procedures were also followed with the pretraining observation data. However, two scales indicated significant differences among the groups. These were Question Difficulty and Question Source. Question Difficulty is the scale contrasting teachers who elicit convergent and divergent responses to their inquiries, and distinguished between the groups at the $P<.005$ level. Question Source purports to measure source of interaction, either pupil or teacher. It distinguished between groups at $P<.05$. These findings were unexpected and will be commented upon in the discussion section.

Although it was expected that the analyses of inventory and behavior data would be completed simultaneously, the original design became impossible because of data loss for one group posttraining. It became impossible to collect the posttraining inventories from the "T-Group only" teachers. Observations were collected from all, so separate analyses were made for the inventory scores and behavior observations.

Finally, to assess differences among the training groups, a discriminant function analysis was completed using behavior observation data after each posttraining measure had been corrected for its own covariate. The correction involved performing a regression analysis which produced residuals for every subject on each of the behavior

observation scales. These residuals were used as data for the discriminant function procedure. It was thought that this procedure would more precisely specify the treatments effects than would any other method (Cooley and Lohnes, 1971; Tatsuoka, 1971).

Results

The procedures described for the preliminary analyses of the inventory data were followed for the three cells contributing post-treatment measures: T-Group, Human Potential Seminar, T-Group followed by Human Potential Seminar. The analyses indicated that significant changes had occurred on the Rokeach Dogmatism Scale ($P<.05$) and the Teacher Practices Inventory ($P<.05$). The teachers that had experienced T-Group followed by Human Potential Seminar and the Control group had scored in the direction of greater "open-mindedness" as measured by the Rokeach Dogmatism Scale. While it is not possible on the basis of these data to make a complete explanation, it could be hypothesized that experience at the Walt Disney Magnet School was itself responsible for the attitudinal shift on the part of the control group. To examine this contingency, Sandler's A-test was calculated to assess the effect of the Disney School experience. It was found that Disney school experience did not affect "open-mindedness". The Human Potential Seminar response of greater "closed-mindedness" found here may be related to such aspects of the treatment as emphasis upon self esteem and taking responsibility for one's own actions. A similar reaction was found in another study (Kirby, 1970) in which a positively oriented treatment produced what appeared as more cynical responses upon the post-test. Rather than negativi m, it might be that such results reveal respondents' greater self-honesty, or lesser need to conform to popular stereotypes.

Although T-Group theory hypothesizes increased openness and awareness as a result of training, in this study it was not possible to isolate the effects of T-Group on "open-mindedness" due to the data loss mentioned. Thus the definitive test of this point remains to be made.

The second significant F-ratio appeared on the Teacher Practices Inventory. The teachers who received sequential treatment--T-Group plus Human Potential Seminar scored higher (more positive attitudes toward experimentalism) than did the Control group. Those who only participated in Human Potential Seminar treatment scored lowest in this regard. The posttreatment analyses of variance yielded one significant F-ratio. (see Table 2)

Table 2

Posttreatment Analysis of Inventories

Variable	Mean Squares Among	Mean Squares Within	F-Ratio
Verbal Facility	.016	.025	<1
Minnesota Teacher Attitude	.417	.449	<1
Rokeach Dogmatism	59.568	6.960	8.904**
Young Change Inventory: Attitude toward			
a. Appropriateness of Educational Change	.038	.123	<1
b. Personal Change	.103	.178	<1
c. Decision Making	.009	.067	<1
d. One's Planning Horizon	.011	.046	<1
Teacher Practices Inventory	5.491	1.255	4.296*

*P<.05, df 2, 13
**P<.005, df 2, 13

Permissive behaviors, the OSCaR scale that contrasts "autocratic" and "democratic" teacher behaviors related to pupil initiative, distinguished among the treatment groups ($P<.05$). Examination of the among groups variance indicated that T-Group plus Human Potential Seminar and T-Group only differed from Human Potential Seminar and the Control group in the amount of variation contributed to the analysis. With some tentativeness, it would appear that the treatments differed significantly with regard to those classroom behaviors subsumed under the OSCaR 5V Permissiveness scale. The results of the discriminant analysis indicated that four variables yielded significant results. Additional scales did not indicate significant discriminations. The significant discrimination was present between T-Group plus Human Potential Seminar and T-Group ($P<.01$), and T-Group plus Human Potential Seminar and the Control ($P<05$). The scales that supplied the discrimination were Permissiveness, Managing Behaviors, Question Quality and Question Difficulty. No significant discriminations were found between T-Group and Human Potential Seminar, between T-Group and Control, nor between Human Potential Seminar and Control for any of the scales. These results suggest that Permissive and Managing Behaviors are the best "predictors" of treatment group membership.

Table 3

Posttreatment Analysis of Behavior Observations

Variable	Mean Squares Among	Within	F-Ratio
Question Source	23.055	39.819	<1
Question Difficulty	49.677	59.708	<1
Managing Behaviors	126.183	102.007	1.237
Lecturing Behaviors	9.774	25.995	<1
Rebuking Behaviors	.188	1.405	<1
Permissive Behaviors	119.381	36.034	3.313*
Question Quality	43.481	99.728	<1

*$P<.05$, df 3, 18

Discussion

The above results seem to indicate that there is some evidence that differences do exist between teachers who had some form of human relations in-service training and those teachers who did not. The question of comparative effectiveness of the two methods can probably best be answered by ranking the groups in order of positive behavioral changes that were found.: T-Group plus HPS, HPS, T-Group, Control.

The evidence indicates that the sequential treatment, T-Group followed by Human Potential Seminar, is probably most effective in connection with in-service human relations training for elementary teachers in an innovative school setting. The evidence further indicates that human relations training programs may be compared and evaluated by quantitative methods. Without such evaluation educators concerned with effecting change in teacher interpersonal competence have no adequate bases upon which to make decisions regarding the available options.

Of course, the small size of the sample limit these findings. However, the randomized assignment to HPS and Control groups led to results that appear to validate HPS as an efficient, economical method for increasing classroom interpersonal competence of elementary school teachers.

In summary, the current study provided evidence with regard to the comparative effectiveness of two human relations training methods. Evidence was also provided relative to the ability of a behavior observation measure to evaluate human relations in-service training methods. This measure, OSCaR 5V, gave promise of utility as a screening device

to select teachers who would benefit from human relations in-service training. Combination of OSCaR 5V and unobtrusive non-verbal measures relating to such items as energy, enthusiasm, and flexibility appears to be in order as a fruitful possibility for research.

Finally, it should be noted that findings from others about the utility of teacher attitude inventories as predictors of behavior change related to human relations training were replicated. Behavior measures seem to predict change, while attitude inventories do not emerge as particularly useful measures.

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